CLAIMS

1. A projector including:
   a housing; and
   an optical engine, said optical engine including a liquid crystal display (LCD) projector to project an image displayed in said LCD projector and further including an objective lens to focus said image onto a distal surface therefrom.

2. A projector as in claim 1 wherein the LCD projector of said optical engine includes a series of optical elements through which a light source is adapted to pass.

3. A projector as in claims 1 or 2 wherein said light source is a collimated light source.

4. A projector as in claim 3 wherein said series of optical elements includes, in order of placement between said light source and said objective lens, an absorption heat filter, a polariser, a condensor lens, and an LCD display which includes an outer polariser.

5. A projector as in claim 4 wherein said optical engine includes a base, two sides and a top clip adapted to hold said optical elements in predetermined fixed relationship.

6. A projector as in any one of the above claims wherein said housing includes a body section adapted to house said optical engine and a lid whereby removal of said lid allows access into said body section.

7. A projector as in any one of the above claims wherein said housing includes one or more cooling vents and at least one fan adapted to draw air from outside of the housing into within the housing and then expel said air out of the housing through said cooling vents.

8. A projector as in claim 7 wherein said housing includes two strategically positioned cooling vents, a first cooling vent positioned substantially above said optical engine and a second cooling vent positioned at the rear of said housing whereby air from outside of said housing is drawn through said first vent by said fan and expelled through said second cooling vent.

9. A projector as in claim 8 wherein said fan is positioned directly in front of said second cooling vent.

10. A projector as in any one of the above claims wherein said optical engine is elevated above the bottom of said housing enabling said air flow to flow underneath said optical engine and over said optical elements to thereby cool said elements.

11. A projector as in any one of the above claims wherein said body section houses further electronic componentry that contributes to projecting said image and provides further features to the projector such as audio means.

12. A projector as in any one of the above claims wherein said projector includes various inputs for connecting relevant devices to said projector and various control components for controlling characteristics of said image.

13. A projector as in any one of the above claims wherein said projector further includes a transformer adapted to convert mains input that is typically some 240/110 Volts to 12 Volts.

14. An image projection apparatus including:
a housing;
a light source positioned within said housing;
a fan positioned within said housing;
an optical engine including a longitudinal base member adapted to house an objective lens at its front end, two side walls extending upwards adjacent its rear end, an upper clip forming an enclosure with said side walls and said base member, said enclosure adapted to hold spaced apart optical elements therein such that said optical elements and said objective lens are coaxially aligned, said optical engine positioned within said housing in front of said light source;
a substantially hollow channel extending between said optical engine and said housing; and
at least two cooling vents forming part of said housing, said first vent located substantially above said optical engine, and said second cooling vent located at the rear of said housing, said fan drawing air from said first vent, through said channel and optical elements, and out of said housing through said second vent.